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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,262	09/17/2003	Richard A. Jewell	23308C	7756

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EXAMINER

HUG, ERIC J

ART UNIT PAPER NUMBER

1731

DATE MAILED: 08/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/666,262	JEWELL ET AL.	
	Examiner	Art Unit	
	Eric Hug	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8-13 and 18-21 is/are pending in the application.
- 4a) Of the above claim(s) 18-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8 and 10-13 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Pursuant to the remand under 37 CFR 41.50(a)(1) by the Board of Patent Appeals and Interferences on July 28, 2006 **for further consideration of a rejection**, a new grounds of rejection is set forth below. Prosecution is hereby reopened.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pasek (WO 98/05206) in view of Applicant's disclosure of known prior art.

Pasek discloses biocidal compounds for microbial treatment of cellulosic materials such as wood and wood fibers. The compositions comprise a quaternary ammonium compound plus a second compound. Resistance to microbial growth is provided by coating the fibers with the composition. DDAC is particularly used as the quaternary ammonium compound. It is disclosed as being used alone or preferably used in combination with the second compound. See for example page 2, lines 1-12 regarding DDAC. Page 5, lines 15-24, for example, discloses that the compositions can be used for wood fibers and products formed therefrom that are exposed to an environment conducive to biological attack. Page 27, lines 11-17 discloses dosages of at least 1000 ppm (at least 0.1%).

Applicant's disclosure of known prior art includes the use of cellulosic fibers, particularly unbleached Kraft fibers, in cement composite materials wherein the cellulosic fibers are prone to biological degradation. It would have been obvious to one skilled in the art to use DDAC or an

Art Unit: 1731

equivalent quaternary ammonium compound alone or in combination with other compounds as taught Pasek to provide resistance to such biological degradation of the cellulose fibers. It would also have been obvious to use the compound(s) in an amount taught by Pasek that provides the desired level of biocidal efficacy. The claimed DDAB would be an obvious variant of DDAC.

Pasek does not disclose refining of wood fibers treated with DDAC and hence does not disclose fiber length degradation resulting from refining fibers treated with DDAC. However, it is felt that the claimed resistance to fiber length degradation is merely an inherent property resulting from the treatment of cellulose fibers with DDAC at the same dosages.

Response to Argument

The status of the claims is as follows:

Claims 8-13 were previously rejected under 35 U.S.C. 103(a) as being unpatentable over Canadian Patent No. 1,134,564 in view of Huth et al. (US 5,049,383) or Schultz et al. (US 5,730,907). This rejection has been withdrawn.

Claims 1-7 and 14-17 have been cancelled.

Claims 18-21 were withdrawn from consideration on August 1, 2005.

A complete analysis of the specification data, Tables 1-6, relied upon by Appellant for establishing unexpected results of the claimed subject matter is the basis for this new grounds of rejection.

It has been determined that evidence of nonobviousness cited by Appellant for the combination of DDAB or DDAC with a copper salt outweighs the evidence of obviousness represented by the applied prior art set forth previously and herein. This data shows

Art Unit: 1731

convincingly that the combination of DDAC and copper salt in the claimed amounts does not result in any major increase in required refining energy and does not cause loss of fiber length while providing an effective biocidal treatment. This would have been unexpected by one of ordinary skill in the art.

However, it has also been determined that the refining data for untreated pulp and DDAC-treated pulp, given in Tables 5 and 6, although it shows no significant fiber degradation for the DDAC-treated fibers, it is not sufficient evidence of nonobviousness. It is clear from the data that copper, not DDAC, is responsible for fiber degradation when used at high levels. There is no evidence that any level of DDAC would cause fiber degradation. Therefore, any level of DDAC added to cellulosic fibers as taught by Pasek would be expected to have no impact on fiber degradation as well.

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 11-13, which are dependent on claim 8 or 9, would be allowable if rewritten to include only the dependency on claim 9.

Claim 9 is allowable for reciting a combination of DDAC and/or DDAB and copper salt in the claimed amounts for the reasons outlined above.

Art Unit: 1731

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Merkley et al (US 6,676,745). Merkley discloses cellulosic fibers and cement composite materials using the cellulosic fibers. The cellulosic fibers are subject to chemical treatment. Among the chemicals that can be used are DDAC and DDAB.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



jeh


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